

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
23 February 2006 (23.02.2006)

PCT

(10) International Publication Number
WO 2006/019063 A1

(51) International Patent Classification:

G11B 5/738 (2006.01) *G11B 5/65* (2006.01)
G11B 5/64 (2006.01) *G11B 5/73* (2006.01)

(74) Agents: **FUKUDA, Kenzo** et al.; Kashiwaya Bldg., 6-13,
Nishihibinbashi 1-chome, Minato-ku, Tokyo 105-0003 (JP).

(21) International Application Number:

PCT/JP2005/014876

(22) International Filing Date: 9 August 2005 (09.08.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

2004-236454 16 August 2004 (16.08.2004) JP
60/604,489 26 August 2004 (26.08.2004) US

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): **SHOWA DENKO K.K.** [JP/JP]; 13-9, Shiba Daimon 1-chome, Minato-ku, Tokyo 105-8518 (JP).

(72) Inventors; and

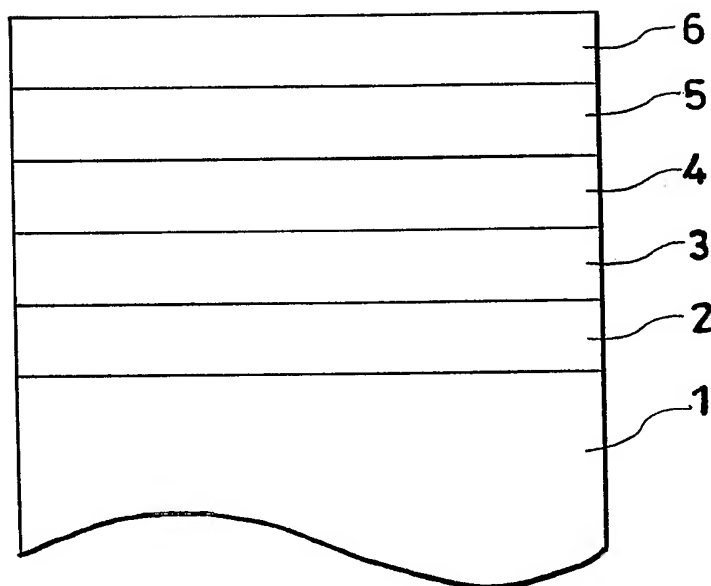
(75) Inventors/Applicants (*for US only*): **OSAWA, Hiroshi** [JP/JP]; Showa Denko HD K.K., 5-1, Yamata Kaigan dori, Ichihara-shi, Chiba 290-0067 (JP). **MATSUMOTO, Shun** [JP/JP]; c/o Showa Denko HD K.K., 5-1, Yawata Kaigan dori, Ichihara-shi, Chiba 290-0067 (JP). **ENDO, Daizo** [JP/SG]; c/o Showa Denko HD Singapore Pte. Ltd., 103 Pioneer Road, Jurong 639582 (SG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MAGNETIC RECORDING MEDIUM AND MAGNETIC RECORDING AND REPRODUCING DEVICE



(57) Abstract: A magnetic recording medium includes an orientation adjusting layer, a nonmagnetic under layer, a nonmagnetic intermediate layer, a magnetic layer and a protective layer sequentially stacked on a nonmagnetic substrate provided on a first surface thereof with a texture streak and used for a magnetic disc. The nonmagnetic under layer contains at least a layer formed of a Cr-Mn-based alloy and possesses magnetic anisotropy having an axis of easy magnetization in a circumferential direction thereof. A magnetic recording and reproducing device includes the magnetic recording medium and a magnetic head for enabling information to be recorded in and reproduced from the magnetic recording medium.

WO 2006/019063 A1